2007-10-11 Pbar Department Meeting

Thursday, October 11, 2007
10:00 AM

Shutdown Progress:

- Mechanical
  - *Leak Check (4)*
    - *Finished D/A, A40, A30, AP3*
      - *D:ESEP, A30 IP fixed; AP3 Pump*
  - *D:ISEP Shielding*
  - *Ion Chamber removal*
  - *Deb DCCT motorized stand*
  - *D:EKIK ceramic tube*
    - Aligned; *Vacuum tight after leak fix; Electrically connected; Tested*
  - *AP2 Water Hose Replacement*
  - *Leaking LQA replaced*
  - *Replaced leaking Deb Sextuple*
  - *SMA water leak; replaced*
  - *4 water leaks fixed*
  - A10 Obstruction Search and Shuffle
  - *Brace Skew Quad Coils*
  - Install new skew quad
  - Water leak on IB6 manifold
  - IQ11 water hose connection
  - Debuncher DCCT fix
    - Instrumentation fixed internal electrical short, to be vacuum tested and then re-installed.

  Target Station
  - *Water Systems (2)*
  - *Temperature Monitoring (2)*
  - *Target Rotation*
  - *Storage*
  - *SEM Module*
  - *LVDTs*
  - *Sample Retrived*
  - Lens motion repair
    - Not successful
  - *Air Exhaust Stack*
  - *10mm-2 into transformer*
  - *10mm-3 into transformer*
    - On Test Stand
  - *Lens replacement*
    - *10mm-2 now in vault and being tested*
  - *HiPot of PMAG*
  - *PMAG water system flush*
  - *Lens Module water system work*
  - *Power/Emergency Generator Switch*
  - *Elevator table repair*
  - Installation sampeds for T972
- *Cooling Systems*
  - *Deb 3&4 Trans Notch Filters*
  - *Deb Double Notch Filters*
  - *Core 4-8GHz Equalizer*
  - *TWT balance & trip points*
  - *Stacktail Filter 3 cable change*

- *Cryo*
  - *Valve Stem replace*
  - *Leak Check (1 of 2)*
  - *LN2 transfer line maintenance*
- Electrical (Pbar & EE Support)
  - *Shunt Move*
  - *Shunt Repairs*
  - *PS Maintenance*
  - *Lens SCRs*
  - Regulation Electronics
    - *Done* except A:LQ
  - *Ion Pump maintenance*
  - *Deb Shunt re-arrangement*
  - *Deb Extraction kicker load adjustment*
- Other
  - Interlocks/Safety System
    - *Vault key tree done; testing to do*
    - *Still left are coasting valve,*
  - Repair cathodic protection
    - Schedule for 10/12
  - Holes under buildings
    - Water dripping from tunnel ceiling
      - *Contractor sealed ceiling*
    - Contractor filled holes
  - DCCT calibration
    - Acc done
    - Deb short found and fixed
  - *Baking System checkout*
  - *RF & TWT filters maintenance*
  - *Lights checkout & repaired*
  - *Acc BPM repairs*
  - *Activation Survey*
  - *Inductance checkout*
  - *PM ODH Fans & Sumps*
  - *Tunnel Wireless*
  - *Install AP2 Leak Detector*
  - SEM maintenance
    - Replaced two preamps.
  - Clogged sump line – Transport

- # Draft schedule agentda plan outline
  - Finish today in the tunnel
  - Tomorrow and Saturday run PS
  - Sunday afternoon/evening establish reverse protons to Acc
  - Accumulator Reverse protons
  - Tue or Wed day shift no beam MI/RR magnet moves (pbar access?)
  - Th start stacking
  - Friday transfers to RR
  - 2x10hr shirts (06:00 - 16:00, 16:00-02:00?)
- **To Reestablish operations**
  - Reverse Protons
    - {1 shift} re-establish MI-ACC ($2D/30sec)
    - {3+ shifts} Accumulator (1-shot timeline)
      - BPM checkout; Orbit Checkout; Aperture (A10, running wave); Tunes across aperture; Calibrate emittance monitors
    - {1+ shifts} Debuncher (1-shot timeline)
      - Establish beam; Orbit Checkout; Aperture (EKIK, running wave)

        - Establish beam; Orbit Checkout; Aperture (EKIK, running wave)
    - Stacking
        - {1+ shifts} 120GeV operations ($29/4.4sec)
            - Protons to Target; Secondaries to Deb (include 120GeV orbit for lens height); Kickers & RF systems timing; pbars to core
        - {2 shifts} Check phasing of cooling systems
        - 20mA {<0.5 shift} phase dampers
        - 40mA to 60mA transfer to Recycler
- **Further Studies:**
    - Clean Accumulator Studies [Reverse Protons]
        - {1 shift} D/A optics ($2D/min)
            - Deb Rev Prot TBT; D/A BPMs?; SEMs
        - {1+ shift} D/A Transfer Efficiency ($2D/min)
            - Set Acc transfer scrapers to define different beam sizes
                - Record DCCTs, SEMs, Loss monitors
        - {1+ shift} A10 & running wave (1 shot timeline)
            - Make component limiting aperture and perform running wave
                - Do different limiting apertures cause running wave response?
        - {1 shift} Accumulator optics – all orbits (1 shot timeline)
        - {1 shift} Commission SQ107 (1 shot timeline)
            - Includes coupling correction and measuring vertical dispersion
    - Accumulator hold onto core [Reverse Protons]
        - {1 shifts} Deb Optics (1 shot timeline)
            - Measure; Change; Measure
    - Stacking
        - {0.5 shift} Commission Debuncher switch-in filters
        - {1+ shift} D/A Transfer Efficiency (long cycle time; consistent beam)
            - Vary Debuncher cooling time
                - Record IPM, Loss Monitors, production rate